

**To:** Yaworsky, Russell[rpyaworsky@usbr.gov]  
**Cc:** Andy.Chu@water.ca.gov[Andy.Chu@water.ca.gov]  
**Bcc:** Hagler, Tom[Hagler.Tom@epa.gov]  
**From:** Foresman, Erin  
**Sent:** Fri 1/24/2014 6:49:46 PM  
**Subject:** RE: Best estimate of Previous Month's 8-River Index??

Hi Russ,

I have a follow up question. The Bay-Delta WQCP, Table 3, and footnote 11 below, refer to "Table 4." Table 4 contains one of the "other ways to win"/comply with the Delta Outflow objective. It is the number of days per month that EC is 2.65 mmhos/cm at Chipps Island and Port Chicago (if triggered). I pasted the table below. If January PMI is less than or equal to 500 TAF, then it looks to me like there are zero days in February, March, April, and May that the Delta Outflow objective has to be met at Chipps Island. Is that your understanding of using this compliance method or 'way to win.'??

**Table 4. Number of Days When Maximum Daily Average Conductivity of 2.64 mmhos/cm Must Be Maintained a**

Number of Days When Maximum Daily Average Electrical Conductivity Must Be Maintained at Specified Location <sup>[a]</sup>											
PMI <sup>[b]</sup> (TAF)	Chippis Island (Chippis Island Station D10)					PMI <sup>[b]</sup> (TAF)	Port Chicago (Port Chicago Station C14) <sup>[d]</sup>				
	FEB	MAR	APR	MAY	JUN		FEB	MAR	APR	MAY	JUN
≤ 500	0	0	0	0	0	0	0	0	0	0	0
750	0	0	0	0	0	250	1	0	0	0	0
1000	28 <sup>[c]</sup>	12	2	0	0	500	4	1	0	0	0
1250	28	31	6	0	0	750	8	2	0	0	0
1500	28	31	13	0	0	1000	12	4	0	0	0
1750	28	31	20	0	0	1250	15	6	1	0	0
2000	28	31	25	1	0	1500	18	9	1	0	0
2250	28	31	27	3	0	1750	20	12	2	0	0
2500	28	31	29	11	1	2000	21	15	4	0	0
2750	28	31	29	20	2	2250	22	17	5	1	0
3000	28	31	30	27	4	2500	23	19	8	1	0
3250	28	31	30	29	8	2750	24	21	10	2	0
3500	28	31	30	30	13	3000	25	23	12	4	0
3750	28	31	30	31	18	3250	25	24	14	6	0
4000	28	31	30	31	23	3500	25	25	16	9	0
4250	28	31	30	31	25	3750	26	26	18	12	0
4500	28	31	30	31	27	4000	26	27	20	15	0
4750	28	31	30	31	28	4250	26	27	21	18	1
5000	28	31	30	31	29	4500	26	28	23	21	2
5250	28	31	30	31	29	4750	27	28	24	23	3

[a] The requirement for number of days the maximum daily average EC (EC) of 2.64 mmhos per centimeter (mmhos/cm) must be maintained at Chipps Island and Port Chicago can also be met with maximum 14-day running average EC of 2.64 mmhos/cm, or 3-day running average NDOIs of 11,400 cfs and 29,200 cfs, respectively. If salinity/flow objectives are met for a greater number of days than the requirements for any month, the excess days shall be applied to meeting the requirements for the following month. The number of days for values of the PMI between those specified in this table

shall be determined by linear interpolation.

[b] PMI is the best available estimate of the previous month's Eight River Index. (Refer to Footnote 10 for Table 3 for a description of the Eight River Index.)

[c] When the PMI is between 800 TAF and 1000 TAF, the number of days the maximum daily average EC of 2.64 mmhos/cm (or maximum 14-day running average EC of 2.64 mmhos/cm, or 3-day running average NDOI of 11,400 cfs) must be maintained at Chipps Island in February is determined by linear interpolation between 0 and 28 days.

[d] This standard applies only in months when the average EC at Port Chicago during the 14 days immediately prior to the first day of the month is less than or equal to 2.64 mmhos/cm.

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*Schedule: M 8:30a - 5:00p; T - F 8:30a - 3:00p*

**From:** Yaworsky, Russell [mailto:[rpyaworsky@usbr.gov](mailto:rpyaworsky@usbr.gov)]  
**Sent:** Friday, January 24, 2014 10:36 AM  
**To:** Foresman, Erin  
**Cc:** Andy.Chu@water.ca.gov  
**Subject:** Re: Best estimate of Previous Month's 8-River Index??

Hi Erin,

The 8-river index for December is 380 TAF and is posted at <http://cdec.water.ca.gov/cgi-progs/iodir/WSI.2014>. The January index won't be posted until early February.

Russ

On Thu, Jan 23, 2014 at 4:27 PM, Foresman, Erin <[Foresman.Erin@epa.gov](mailto:Foresman.Erin@epa.gov)> wrote:

Hi Andy and Russ,

I was wondering if you can help me find the best estimate of January 2014's 8-river index for runoff. I'm trying to find the "previous months eight river index" (units of TAF) that is referred to in foot note 10 to Table 3 in the Bay-Delta WQCP. I thought I recalled that number being discussed on DOSS two weeks ago but I don't recall what it is. The discussion was with respect to potential difficulty meeting Feb 1 Delta Outflow objective. Do you know how I find that number or do you calculate it more often than the publication of Bulletin 120?

*[10] The objective is increased to 6,000 cfs if the best available estimate of the Eight River Index for December is greater than 800 TAF. [Note: The Eight River Index refers to the sum of the unimpaired runoff as published in the DWR Bulletin 120 for the following locations: Sacramento River flow at Bend Bridge, near Red Bluff; Feather River, total inflow to Oroville Reservoir; Yuba River flow at Smartville; American River, total inflow to Folsom Reservoir; Stanislaus River, total inflow to New Melones Reservoir; Tuolumne River, total inflow to Don Pedro Reservoir; Merced River, total inflow to Exchequer Reservoir; and San Joaquin River, total inflow to Millerton Lake.]*

*[11] The minimum daily Delta outflow shall be 7,100 cfs for this period, calculated as a 3-day running average. This requirement is also met if either the daily average or 14-day running average EC at the confluence of the Sacramento and the San Joaquin rivers is less than or equal to 2.64 mmhos/cm (Collinsville station C2). If the best available estimate of the Eight River Index (described in footnote 10) for January is more than 900 TAF, the daily average or 14-day running average EC at station C2 shall be less than or equal to 2.64 mmhos/cm for at least one day between February 1 and February 14; however, if the best available estimate of the Eight River Index for January is between 650 TAF and 900 TAF, the Executive Director of the State Water Board shall decide whether this requirement applies. If the best available estimate of the Eight River Index for February is less than 500 TAF, the standard may be further relaxed in March upon the request of the DWR and the USBR, subject to the approval of the Executive Director of the State Water Board. The standard does not apply in May and June if the best available May estimate of the Sacramento River Index (described in footnote 5) for the water year is less than 8.1 MAF at the 90% exceedance level. Under this circumstance, a minimum 14-day running average flow of 4,000 cfs is required in May and June. Additional Delta outflow objectives are contained in Table 4*

Thanks in advance for any help you can provide.

Erin

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